



Fermilab

Beams Division / RFI Department / HLRF Group

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**Booster Conductivity
Watchdog
Test Procedure**

The Conductivity Watch Dog Modules are standard NIM type modules. They require +/-24V and +6 for the interface electronics. The +/-15V power needed for the operational amplifiers is generate by two onboard regulators.

Watchdog Module Schematic Drawing Numbers

Watchdog Conductivity Module DWG#: **0337.01-EC-63453**

Bench Equipment Needed

- 1) NIM Crate with power supply.
- 2) Schematic
- 3) Bench Power Supply
- 4) Bench Oscilloscope
- 5) Digital Volt Meter with probes

Bench Check Out Procedure

- 1) Check out NIM Circuits Power supplies. (**+/-24 and 6V**)
- 2) Check out onboard regulators (**+/-15**) Circuits Power supplies.
- 3) Adjust +10 Volt AD27xx Precision voltage regulator for 10.0V at U7 Pin13 or at (T.P Blue)
- 4) Adjust R7 set point at U5 pin6 (White Test Point) for 2.5V.
This is for the Low Limit Trip Level of (**4.5 Meg Ohm = 2.5V**).
- 5) Place a 5.0V source on the input of the Conductivity module.
- 6) Using a DVM measure the analog output at U4 Pin6 (Gray Test Point).
Should read 10.0V.

Sensors and Measuring Device Part Numbers

Conductivity Meter: Beckman Industrial
Solu Meter Conductivity Controller
Model: SM1

Conductivity Cell: Beckman Industrial
Model: 431 (0.01/CM)

Booster Acnet Parameters

Booster Tunnel

B:TLCWC Tunnel 95 LCW Conductivity

Booster West Gallery

B:WLCWC West 95 LCW Conductivity